

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
9 August 2001 (09.08.2001)

PCT

(10) International Publication Number
WO 01/58110 A3

(51) International Patent Classification⁷: H04L 29/06

(21) International Application Number: PCT/IE01/00016

(22) International Filing Date: 5 February 2001 (05.02.2001)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
2000/0108 3 February 2000 (03.02.2000) IE
2000/0289 13 April 2000 (13.04.2000) IE

(71) Applicant (for all designated States except US): APION
TELECOMS LIMITED [IE/IE]; Blindgate House,
Batchelors Lane East, Drogheda, County Louth (IE).

(72) Inventors; and

(75) Inventors/Applicants (for US only): MCCONNELL,
Richard [GB/GB]: Openwave, Capital House, 3 Upper
Queens Street, Belfast BT1 6LS (GB). KING, Peter
[US/US]: Openwave, 800 Chesapeake Drive, Redwood

City, CA 94063 (US). CLARKE, Seamus [GB/GB]:
Openwave, Capital House, 3 Upper Queens Street, Belfast
BT1 6LS (GB). MURPHY, Denis [GB/GB]: Openwave,
Capital House, 3 Upper Queens Street, Belfast BT1 6LS
(GB). RODGERS, Michael [GB/GB]: Openwave, Capital
House, 3 Upper Queens Street, Belfast BT1 6LS (GB).

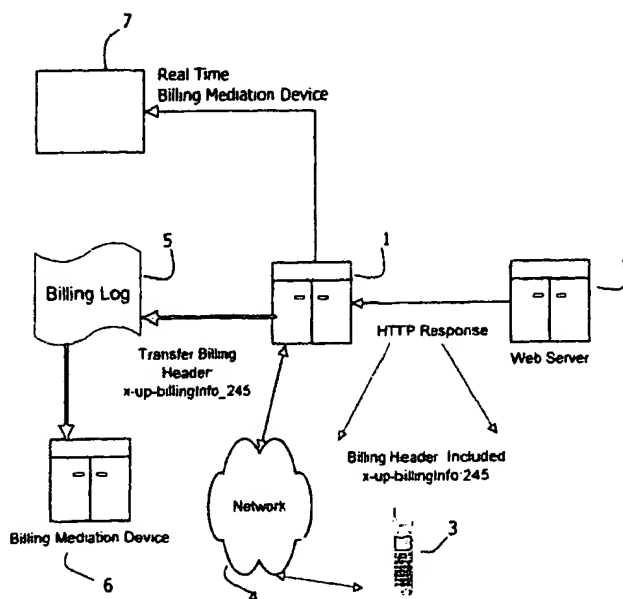
(74) Agents: WELDON, Michael, J. et al.; John A. O'Brien
& Associates, 3rd floor, Duncairn House, 14 Carysfort Av-
enue, Blackrock, County Dublin (IE).

(81) Designated States (national): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ,
DE, DE (utility model), DK, DK (utility model), DM, DZ,
EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN,
IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV,
MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT,
RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA,
UG, US, UZ, VN, YU, ZA, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian
patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European

[Continued on next page]

(54) Title: A NETWORK GATEWAY-BASED BILLING METHOD



(57) Abstract: A gateway (1) routes signals between a WAP mobile phone (3) and an application on a Web server (2). The application generates a message for each of a number of events recognised according to the service being provided. These messages are transmitted to the gateway (1). A billing manager in the gateway (1) directs the messages in real time to a real time mediation device (7) if they relate to a pre-pay service, or alternatively to a billing log (5) for off-line processing. The network operator operating the gateway can thus charge in a manner relating to services provided instead of simply call duration.



patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE,
IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF,
CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

(88) Date of publication of the international search report:
28 February 2002

Published:

-- with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

Intern al Application No

PCT/IE 01/00016

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H04L29/06

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H04L G06F H04Q

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 99 31610 A (BRITISH TELECOMM ; LEVERIDGE PHILIP CHARLES (GB)) 24 June 1999 (1999-06-24) abstract	1, 18
Y	page 7, line 23 - page 9, line 24 page 11, line 9 - page 12, line 5 page 2, line 2 - line 12 page 3, line 8 - page 5, line 18 ---	2-17, 19-24
Y	US 5 873 030 A (PIMENTAL THELMA ET AL) 16 February 1999 (1999-02-16) abstract; figures 2C, 3A column 2, line 41 - column 3, line 9 column 5, line 9 - line 20 column 8, line 45 - column 10, line 9 --- -/--	2-17, 19-24

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

A document defining the general state of the art which is not considered to be of particular relevance

E earlier document but published on or after the international filing date

L document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

O document referring to an oral disclosure, use, exhibition or other means

P document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

G document member of the same patent family

Date of the actual completion of the international search

20 July 2001

Date of mailing of the international search report

01/08/2001

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Stergiou, C

INTERNATIONAL SEARCH REPORT

Intern al Application No

PCT/IE 01/00016

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 794 221 A (EGENDORF ANDREW) 11 August 1998 (1998-08-11) abstract; figures 2,3 column 2, line 9 - line 65 column 5, line 61 -column 6, line 51 ---	1-24
A	US 5 845 267 A (RONEN YZHAK) 1 December 1998 (1998-12-01) abstract column 2, line 41 -column 3, line 12 column 6, line 52 -column 7, line 43 ---	1-24
A	J. ALVINEN, J. LATHI, A. BOBOTEK ET AL.: "WAP Push Architectural Overview" WIRELESS APPLICATION FORUM, 8 November 1999 (1999-11-08), pages 1-26, XP002172466 page 14, line 1 -page 15, line 11; figure 5 -----	1-24

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/IE 01/00016

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 9931610	A	24-06-1999	AU 1570399 A CN 1282432 T EP 1040437 A	05-07-1999 31-01-2001 04-10-2000
US 5873030	A	16-02-1999	NONE	
US 5794221	A	11-08-1998	AU 726993 B AU 5986596 A CA 2226253 A EP 0845125 A JP 2000505568 T US 6188994 B WO 9703410 A	30-11-2000 10-02-1997 30-01-1997 03-06-1998 09-05-2000 13-02-2001 30-01-1997
US 5845267	A	01-12-1998	AU 3819197 A WO 9810382 A	26-03-1998 12-03-1998